

Application Serial No. 10/551,276
Reply to Office Action of April 2, 2008

PATENT
Docket: CU-6541

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

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Listing of claims:

1. (Previously Presented) A substrate for a liquid crystal display comprising at least a transparent substrate and a columnar spacer formed on the transparent substrate, wherein the substrate for a liquid crystal display is a following amount of an initial deformation A obtained by measuring the columnar spacer by a following measurement method is 0.04 μm or more, and a following amount of a plastic deformation B is 0.7 μm or less:

measurement method: a compression load is applied in a axial direction of the columnar spacer up to 80 mN at a load applying speed of 22 mPa/sec and that state is maintained for 5 seconds; thereafter, a load is removed down to 0 mN at a load removing speed of 22 mPa/sec, and that state is maintained for 5 seconds,

amount of initial deformation A: an amount of a compression deformation obtained by X-Y assuming that an initial height of the columnar spacer is X, and a height when a load F (mN) obtained by a following formula (1) is applied during an above load application is Y:

$$F=19.6/n \text{ (1)}$$

($10 \leq n \leq 50$, n is a density of a number of columnar spacers (pieces/mm²)).

amount of plastic deformation B: an amount of a residual deformation obtained by X-Z assuming that the initial height of the columnar spacer is X and a height after removing the load and maintaining that state for 5 seconds is Z.

2. (Previously Presented) The substrate for a liquid crystal display according to claim 1, wherein a following elastic deformation ratio C is 60% or more:

elastic deformation ratio C: a deformation ratio obtained by $[(Z-W)/(X-W)] \times 100$ assuming that the initial height of the columnar spacer is X; a height after applying a load of 80 mN and maintaining for 5 seconds is W; and a height after removing the load and maintaining for 5 seconds is Z.

3. (Previously Presented) The substrate for a liquid crystal display according

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to claim 1 being used in a liquid crystal display of 17 inches or more.

4. (Previously Presented) The substrate for a liquid crystal display according to claim 2 being used in a liquid crystal display of 17 inches or more.

5. (Cancelled)

6. (Currently Amended) A liquid crystal display comprising wherein the substrate ~~for a liquid crystal display according to~~ of claim 1.

7. (Currently Amended) A liquid crystal display comprising wherein the substrate ~~for a liquid crystal display according to~~ of claim 2.

8. (Currently Amended) A liquid crystal display comprising wherein the substrate ~~for a liquid crystal display according to~~ of claim 3.

9. (Currently Amended) A liquid crystal display comprising wherein the substrate ~~for a liquid crystal display according to~~ of claim 4.